

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) In a cell for electrowinning aluminium, the cell containing a molten electrolyte in which alumina is dissolved,

an anode that is in contact with the molten electrolyte for electrowinning aluminium from the alumina dissolved in a the molten electrolyte,

said anode comprising a cobalt-containing metallic outwardly-facing outer part that is covered with an integral oxide layer containing predominantly cobalt oxide CoO, the integral oxide layer being obtainable by subjecting the cobalt-containing metallic outwardly-facing part to an oxidation treatment at a temperature of at least 895°C to form from the cobalt-containing metallic outwardly-facing part said integral oxide layer containing predominantly CoO.

2. (Original) The anode of claim 1, wherein the integral oxide layer has an open porosity of up to 12%, in particular up to 7%.

3. (Previously amended) The anode of claim 1, wherein the integral oxide layer has an average pore size below 7 micron, in particular below 4 micron.

4. (Currently amended) The anode of claim 1, wherein the metallic outwardly-facing outer part contains:

- at least one of nickel, tungsten, molybdenum, tantalum and niobium in a total amount of 5 to 30 wt%, in particular 10 to 20 wt%, said nickel, when present, being contained in the metallic outer part in an amount of up to 20 weight% of the metallic outer part, in particular 5 to 15 weight%; and
- one or more further elements and compounds in a total amount of up to 5 wt%, the balance being cobalt.

5. (Currently amended) The anode of claim 1, wherein the metallic outwardly-facing outer part contains cobalt in an amount of at least 95 wt%, in particular more than 97 wt% or 99 wt%.

6. (Currently amended) The anode of claim 1, wherein the metallic outwardly-facing outer part contains a total amount of 0.1 to 2 wt% of at least one additive selected from silicon, manganese, tantalum and aluminium, in particular 0.1 to 1 wt%.

7. (Previously amended) The anode of claim 1, wherein the integral oxide layer contains cobalt oxide CoO in an amount of at least 80 wt%, in particular more than 90 wt% or 95 wt%.

8. (Previously amended) The anode of claim 1, wherein the integral oxide layer is substantially free of Co_2O_3 and substantially free of Co_3O_4 .

9. (Previously amended) The anode of claim 1, wherein the integral oxide layer is electrochemically active for the oxidation of oxygen ions and is uncovered or is covered with an electrolyte-pervious layer.
10. (Previously amended) The anode of claim 1, wherein the integral oxide layer is covered with an applied protective layer, in particular an applied oxide layer.
11. (Original) The anode of claim 10, wherein the applied protective layer contains cobalt oxide.
12. (Previously amended) The anode of claim 10, wherein the applied protective layer contains iron oxide.
13. (Original) The anode of claim 12, wherein the applied protective layer contains oxides of cobalt and of iron, in particular cobalt ferrite.
14. (Previously amended) The anode of claim 10, wherein the protective layer contains a cerium compound, in particular cerium oxyfluoride.
15. (Previously amended) The anode of claim 10, wherein the applied protective layer is electrochemically active for the oxidation of oxygen ions and is uncovered or is covered with an electrolyte pervious-layer.
16. (Previously amended) The anode of claim 1, which has an electrochemically active surface that contains at least one dopant, in particular at least one dopant selected from iridium, palladium, platinum, rhodium, ruthenium, silicon, tantalum, tin or zinc metals, Mischmetal and their oxides and metals of the Lanthanide series as well as mixtures and compounds thereof, in particular oxides.
17. (Original) The anode of claim 16, wherein the electrochemically active surface contains a total amount of 0.1 to 5 wt% of the dopant(s), in particular 1 to 4 wt%.
18. (Currently amended) A method of manufacturing an anode as defined claim 1, comprising:
- providing an anode body having a cobalt-containing metallic outer-facing outer part; and
 - subjecting the outer part to an oxidation treatment at a temperature of at least 895°C to under conditions for form an integral oxide layer containing predominantly CoO on the outer part, and
 - contacting the anode with the molten electrolyte.
19. (Original) The method of claim 18, wherein the oxidation treatment is carried out in an oxygen containing atmosphere, such as air.
20. (Previously amended) The method of claim 18, wherein the oxidation treatment is carried out at an oxidation temperature above 895°C or 920°C, preferably above 940°C, in particular within the range of 950 to 1050°C.

21. (Currently amended) The method of claim 20, wherein the metallic outer-facing outer part is heated from room temperature to said oxidation temperature at a rate of at least 300°C/hour, in particular at least 450°C/hour, for example by being placed in an environment, in particular in an oven, that is preheated at said oxidation temperature.
22. (Previously amended) The method of claim 20, wherein the oxidation treatment at said oxidation temperature is carried out for more than 8 or 12 hours, in particular from 16 to 48 hours.
23. (Previously amended) The method of claim 18, wherein the outer part is further oxidised during use.
24. (Cancelled)
25. (Currently amended) The anode cell of claim 1 24, ~~wherein said anode is in contact with a molten electrolyte of the cell,~~ in said cell wherein the electrolyte is being at a temperature below 960°C, in particular in the range from 910° to 940°C.
26. (Currently amended) A method of electrowinning aluminium using an anode in a cell as defined in claim 1 24, said method comprising passing an electrolysis current via the anode through the electrolyte to produce oxygen on the anode and aluminium cathodically by electrolysing the dissolved alumina contained in the electrolyte.
27. (Original) The method of claim 26, wherein oxygen ions are oxidised on the anode's integral oxide layer that contains predominantly cobalt oxide CoO.
28. (Currently amended) The method of claim 26, wherein oxygen ions are oxidised on an active layer applied to the anode's integral oxide layer that contains predominantly cobalt oxide CoO, said integral oxide layer inhibiting oxidation and/or corrosion of the anode's metallic outer-facing outer part.
29. (Cancelled)